

WHAT IS CLAIMED IS:

1. A furnace wall structure having a furnace wall 1 installed in a furnace which is the combustion chamber of a boiler for thermal power generation, said furnace wall 1 comprising:

a furnace wall bottom part A composed of furnace wall tubes 2a having upward-spiraled fluid passages; a nose part C which has nose wall tubes 5a disposed in a middle part of a furnace rear wall B adjoining the furnace wall bottom part A; and a screen part D having screen tubes 7, wherein

the terminal parts of said furnace wall tubes 2a are located lower than the nose part C.

2. The furnace wall structure according to Claim 1, further comprising a header 6 provided at the connection part between the terminal parts of said furnace wall tubes 2a and said nose wall tubes 5a, the header 6 being installed lower than said nose part C and outside the furnace wall 1.

3. The furnace wall structure according to Claim 2 further comprising furnace wall tubes 2b (2b₁, 2b₂) which extend upright from the terminal parts of said furnace wall tubes 2a are provided so as to connect parts 2b₁ of the furnace wall tubes 2b directly

with the header 6, to connect the header 6 with the nose wall tubes 5a via vertical tubes 5e₁ and 5e₂; and to connect other parts 2b₂ of said furnace wall tubes 2b directly with the screen tubes 7, thereby integrating the vertical furnace wall tubes 2b (2b₁, 2b₂), the vertical tubes 5e₁ and 5e₂, and the screen tubes 7 by being welded via membrane bars 3.

4. The furnace wall structure according to Claim 3, wherein the parts 2b₁ of said vertical furnace wall tubes 2b are bent downwards to be connected with the header 6; horizontal tubes 5b₁ and 5b₂ are provided in such a manner as to be divided from the header 6 into opposite sides in the horizontal direction; the horizontal tubes 5b₁ and 5b₂ are connected with the vertical tubes 5e₁ and 5e₂ which partly extend upright adjacent to the vertical furnace wall tubes 2b (2b₁, 2b₂) via the vertical tubes 5c₁ and 5c₂ and the horizontal tubes 5d₁ and 5d₂; and the vertical tubes 5e₁ and 5e₂ are connected with the nose wall tubes 5a, respectively.

5. The furnace wall structure according to Claim 2, further comprising: drain tubes 5d provided at the bottom of the header 6; and an open/close valve 10 provided at the drain tubes 5d.